U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Santa Clara Wastewater Treatment Plant Emergency Response - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IX

Subject:	**POLREP #3** **Progress** **Santa Clara Wastewater Treatment Plant Emergency Response** **Santa Paula, CA** **Latitude: 34.3144538 Longitude: -119.1024780**
To:	Harry Allen, EPA Region 9 Kathleen Salyer, EPA Region 9 Enrique Manzanilla, EPA Region 9
From:	Martin Powell, OSC
Date:	12/7/2014
Reporting Period:	11/29/2014 - 12/05/2014

1. Introduction

1.1 Background

Site Number:	A973	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	
Response Authority:	CERCLA	**Response Type:**	Emergency
Response Lead:	EPA	**Incident Category:**	
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	11/18/2014	**Start Date:**	11/18/2014
Demob Date:		**Completion Date:**	
CERCLIS ID:	CAN000900238	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

Emergency Response

1.1.2 Site Description

The incident began at approximately 3:30 am on November 18, when a vacuum truck exploded. Reports vary as to what activities lead up to the explosion (one suggested that the operator had begun aggregating wastes from totes at the facility into the vac truck). A fire ensued, eventually involving several waste streams, including oxidizers, acids, polymerizing agents, and possibly chlorine tablets. It is not clear what was in the vac truck when the explosion began. The secondary containment filled with a watery sludge from the mixed chemicals.

Almost immediately, fine crystals formed on the drying surfaces from the chemical mix; these were found to be shock sensitive, and the VCFD experienced a couple of incidents of sparks and small explosions from walking on the crystals. VCFD Haz Mat indicated that all tests on the crystals indicated an organic peroxide. VCFD and Santa Paula fire each abandoned one firefighting rig in the facility due to contamination with shock-sensitive organic peroxide.The Ventura County Sheriff conducted an evacuation out to a distance of one half mile and a shelter in place advisory was issued to residents located up to three miles downwind.

1.1.2.1 Location

815 Mission Rock Road, Santa Paula, CA 93060

1.1.2.2 Description of Threat

The fire has been extinguished, although a significant smoke plume/gas cloud was observed to leave the site.

The following inventory summarizes chemicals reported to be on the site prior to the fire. It is believed that other unknown chemicals were also present.

Common Name	Maximum Amount Onsite
motor oil	110 gallons
oxygen	1,000 cubic feet
acetylene	600 cubic feet
potassium permanganate	1,500 pounds
diesel fuel	500 gallons
320-L polymer	1,980 gallons
460-TC polymer	660 gallons
chlorine tablets	2,750 tablets
hydrogen peroxide	3,300 gallons
soda ash	3,300 gallons
sodium hypochlorite	990 gallons
aluminum chloride	1,650 gallons
anionic polymer	2,750 gallons
defoamer	110 gallons
emulsion breaker	110 gallons
ferric sulfate	3,300 gallons
sulfuric acid 93-99%	660 gallons
used motor oil	110 gallons
used motor oil filters	100 gallons

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Due to the nature of the hazards onsite, the site assessment process is running in parallel with cleanup/neurtalization operations. While the specific chemicals of concern are unknown, the driving hazardous are pH and oxidizers. The oxidizers are shock sensitive, erupt in a flash of fire, and are pervasive onsite. Therefore neutralization efforts are employeed prior to assesssment, with assessment serving as confirmation of successfull neutralization. This process continues as areas of the site are cleared, thus allowing access to the uncontained mixture of chemicals located in the center of the site. Traditional offsite laboratory analysis is currently unavailable due to the hazard that samples pose to the lab equipment and personnel. Alternative methods are being explored, as are stabilization alternatives for the ponded chemical mixture on site.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

2.1.2 Response Actions to Date

11-29-2014 EPA Personnel: OSC (2), PST (2), START (1)
The Coast Guard Pacific Strike Team (PST) deployed two team members at the US EPA's request to assist in oversight activities. US EPA OSC Maggie Waldon arrived on-site to transition with OSC Powell.

The Patriot/CTEH safety stand-down continued through the morning, with no field activities anticipated for the day.

Rain has been forecasted intermittently through the next few days, with a heavy rain event forecasted for Tuesday. SCWWTP does not have a Storm Water Prevention Plan available for review. Patriot, along with input from the SCWWTP operations manager, developed a predictive flow map for the site. Areas of concern will be sand bagged to limit a potential release from the site and containment boom will be deployed in the creek surrounding the site.

Patriot/CTEH presented an approach to site work which is predicated on attacking individual areas of the site. The site has been divided into Divisions (alphabetical) A through D. Each Division, when appropriate, will be broken into small Sectors (numerical) to sharpen the focus of field work. A site map with operational boundaries has been uploaded as a document to EPAOSC.net for reference. Patriot is working to obtain Tychem ThermoPro PPE, which is protective of both chemical and flash fire threats, for entry team personnel.

US EPA requested the use of the USCG PST Remote "Harvey" Andros Vehicle on site to assist in the monitoring and identification of potential hazards on site. It will mobilize out to site on Sunday (11/30) and should be deployed by Monday (12/1).

11-30-2014 EPA Personnel: OSC (2), PST (2), START (1)
Patriot deployed sandbags to potential storm water runoff points along the perimeter of the site. Absorbent boom and containment boom have been deployed into the creek past the north and south extents of the site. A large storm event is forecasted for Monday night/Tuesday morning.

Neutralization and decontamination work in Sector A1 was conducted today in Sector A1. The entry team (1 Patriot and 1 CTEH personnel) donned SCBAs with Tychem ThermoPro and sprayed neutralization solution (5% sodium sulfate by weight) along the area. They proceeded to pressure wash the area after all reactions completed. The team completed roughly 50% of Sector A1 and will continue tomorrow.

Patriot/CTEH submitted the revised the "Release Area Stabilization Plan" to EPA. The OSCs, as part of Unified Command, will review and approve as appropriate.

12-1-2014 EPA Personnel: OSC (2), ERT (1), PST (4), START (1)

ERT Sr Chemist P. Campagna is onsite to provide the OSC with advice and guidance related to the nature of the shock sensitive crystals onsite, analytical options, and neutralization schemes. Neutralization and decontamination work continues on-site today under the "Release Area Stabilization Operations Plan v2.0." Application of sodium sulfite and power-washing as outlined in the RASOP 2.0 continues, and treatment in Sector A1 is identified as complete, however a confirmatory survey of the area was not performed. Treatment (stabilization) of Sectors E1 and E2 is planned to occur, however, sodium sulfite will not be used to pre-treat the areas prior to power washing. "Swipe" test survey of these areas performed by CTEH indicate no presence of the physically-unstable compound, and in order to minimize the amount of high pH water (10+ with the NaSO3 soln) being generated, power washing only is agreed upon.

Field teams continue to prepare for the large rain event forecasted to begin tomorrow. START and USCG PST, under direction by OSC, develop a methodology for the collection of a source product material of the unknown physically unstable chemical from an area of highest contamination using the HARVEY robot. It is agreed that further analysis of the unstable chemical (hazcat, IR spec, Ramann Laser spec, and subsequent lab analysis) is needed to properly characterize the threat, and the best chance of getting a viable sample of the product would be by using the robot to make an down-range entry to the sectors of highest contamination. Ops for the robot/sample collection are scheduled to occur on 12/3, after the rain, as time constraints encountered during 12/1 would rush the planning phase of the operation.

12-2-2014 OSC (1), ERT (1), PST (4), START (1)

On-site power-washing of Sector E continues, however, activities associated with this task cease due to substantial rainfall and overland flow across the site. CTEH and Patriot shift all resources from site stabilization activities to stormwater reduction and containment a few hours after work begins for the day. Rainfall rates over the course of the day are as much as ¼ to 3/8 inch an hour.

Sector E has accumulated a large amount of water, and is close to being at a point where a release would be likely as of 15:00. Water collecting in the east end of E3 is travelling under the concrete berm near the east fence, off the concrete pad, and has collected between the fence (east side site boundary) and the boundary of sector E3. Overland flow of the pooled water is flowing in to a hole at the south end of the access driveway/gate where it is collecting. The culvert on the north end of the drive is dry, and the water level at the south end is not rising, even though significant flow is observed to this area.

The road running from NE to SW at the eastern side of the site is flooded up to 2ft in some areas, however, water is isolated to the road and migration to the neighboring properties is not observed. It is not clear/observable that the origin of this water is from the SCWWTP ER site, and is believed that this volume is not due to a release from the site.

The water level of the “lake” in Sector D has been slowly rising all day, and at 15:00 is extending to roughly 15-20 feet in front of the Patriot 120bbl truck parked in B2. A sandbag berm has been constructed between sectors A2 and B2, directly behind the Patriot 120bbl truck to prevent a release to the already cleared areas. A berm had been constructed between sectors A2 and F1, however, was removed because the Plant Operator advised Patriot that a “low area” exists at the northwest side of the site (Above F3), that would release directly to the ditch/drainage channel which borders the site on two sides and drains to the Ventura River. The berm between A2 and F1 was removed in order to berm the low lying area with soil using a front end loader (front end loader tires were surveyed with oxidizer test-strips after this operation was complete). Overland flow from the area north of A2 is flowing across A1 and pooling/collecting near Sector F4. Water breaches the secondary containment of F4 at roughly 16:00 and releases to the street at the gate near the NE boundary of F1 (near decon C). Ventura County Env Health personnel estimates the release to be roughly 100 gallons. CTEH and Patriot personnel quickly berm the gate to prevent further release and immediately collect a sample of the water that released from the site. Stormwater collecting in Sector E will be containerized in to baker tanks that are delivered on-site during the evening of 12/2 in order to prevent an additional release from the site from this area.

12-3-2014 OSC (1), ERT (1), PST (4), START (1)

Sector A1 is surveyed post-rain event to measure effect of overland flow from rain event. Water from overland flow has collected/pooled in A1 and peroxide (oxidizer) test strip survey indicate concentrations as high as 22ppm. Formerly cleared Sector A1 will be stabilized again, once standing water is dealt with. The baker tanks that were delivered at the end of the operational workday on 12/2 and had been used to containerize water from E1 and E2 are now emitting H2S, as measured by personal air monitors and AreaRAEs. Tanks are marked as such, and LvL B restrictions are implemented around this area, as well as continuous air monitoring.

Due to significant rainfall, and the effect that the water has had to stabilize the physical instability (shock sensitivity) of the unknown chemical, implementation of the HARVEY robot to collect judgmental samples of the source material is abandoned in lieu of a Patriot and CTEH personnel hot-zone entry for sample collection. Four samples are collected from areas determined to be the most likely to now contain the unknown material, based on observations made during the initial haz-cat process regarding the mobility of the product in solution. Samples are collected from: 1) trench(water/liquid from the trench/puddle) between the frac-tanks (sector B2) and concrete pad used to store totes at the west end of the site, 2) soil from standing water (puddles) north of the frac-tanks (Sector B2) at the interface between the concrete pad and soil, 3) from the front driver’s side bumper of the Patriot 120bbl tanker truck, and 4) mud from the NE side of the secondary containment berm of Sector B2.

Hazard Classification is performed on the samples collected during the 12/3 entry. Data generated during the haz-cat process are inconclusive and can’t be used to substantiate the effectiveness of the sample design/location bias in order to pin-point a strong sample of the physically-unstable unknown material. Sample containers are left on-site in the haz-cat tent, and will be observed over the course of the next few days as they dry out. If recrystallization occurs as the samples dry, haz-cat analysis will be performed in order to better define the threat.

The Plant Operator has asked if he could resume limited operations at the site. At this time those operations are inconsistent with the Objective set out in the IAP by the Unified Command. Further, the facility currently does not have a Storm Water Plan, an SPCC plan, or a functional business plan with a contingency for release.

12-04-2014 OSC (1), PST (2), START (1)

The Coast Guard Strike Team robotic device and crew demobed this date sampling plan changes due to significant rainfall at the site. Two Strike Team members remain on site to assist the OSC with site operations monitoring. OSC Waldon and ERT Campagna also demobed this date.

Field efforts focus on conducting wipe and soil haz cat analyses to re-clear the Support and Contamination Reduction Zones after the rains. The zones in the northern and southern portion of the site have been cleared for entry. Plans for the following operations period will include decontamination and confirmation sampling of the area south of the containment area where the sludge pond currently resides.

12-05-2014 OSC (1), PST (2), START (1)

Operations focus on clearing the southern approach to the containment pool (areas B1 and B2), as well as decontaminating two vac trucks parked in the northeastern corner of the facility. Ops performed confirmation swipe testing in the northern and southern approaches (E1,E2, A1, A2), and moved the exclusion zone toward the containment pond.

CTEH performed a Level B entry into areas B,C, and D to collect liquid and solid samples from pools and the vac trucks at the site. The entry team tested the surfaces for pH and oxidizers, and retrieved seven samples to be haz catted in the next ops period. Most of the samples yielded pHs in the normal range, and all but the screenings near the Patriot transport truck in B2 tested negative for oxidizers

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

Southern Califiornia Wastewater (aka Southern California Wastewater) is believed to be the owner/operator of the facility. Green Compass, is believed to be their parent company. Work at the site is being conducted by Patriot Environmental Services, who has provided EPA a copy of a Master Services Agreement. This agreement between Patriot Environmental Services and Southern California Waste Water is dated 11/18/2014 . The following services are requested under this agreement: provide personnel equipment and materials to post fire cleanup at Mission Rock located as directed.

OSC Powell has provided verbal notice to the PRP's legal counsel on 11/24/2014, and to the PRP on 11/25/2014. A NFRA was issued to the Plant's Operation Manager on 11/26/2014. On 11/28/2014 the Plant's Operation Manager stated that the NFRA had been provided to the PRP. A signature memorializing receipt of NFRA has not been forthcoming to date.

2.2 Planning Section

2.2.1 Anticipated Activities

Conduct all work in a safe manner
Continue to evaluate contamination of the facility
Continue to evaluate any offsite impacts
Continue to decontaminate trucks and apparatus that inhibit safe access to work areas
Continue cleanup of facility, and initiate treatment/disposal of waste material
Continue to keep the community and response partners informed of site activities
Prepare for rain events

2.2.1.1 Planned Response Activities

2.2.1.2 Next Steps

Continue site operations

2.2.2 Issues

Onsite contamination is extremely reactive. Onsite personnel (with support from offsite resources) are continuing to evaluate treatment/neutralization or stabilization options which will render the material safe for disposal.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

2.5.1 Safety Officer

2.5.2 Liaison Officer

2.5.3 Information Officer

Public affairs are being handled by Ventura County OES and FD.

EPA does not have a PIO onsite. Nahal Mogharabi is serving as the EPA PIO from a remote location and will provide onsite support if requested.

3. Participating Entities

3.1 Unified Command

Santa Clara Wastewatere Treatment, EPA and Ventura County Environmental Health

3.2 Cooperating Agencies

Ventura County Fire
Ventura County Sheriff
Santa Paula Fire
Ventura County Agricultural Commission
U.S. Food and Drug Administration
CA Department of Public Health, Food and Drug Branch
CA OSHA

4. Personnel On Site

No information available at this time.

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.